



Methodological Evaluation of District Hospitals Systems in Rwanda Using Quasi-Experimental Design for Efficiency Measurement

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Abstract

District hospitals in Rwanda face challenges related to resource allocation and operational efficiency. A systematic literature review employing rigorous academic databases including MEDLINE, PubMed, and Web of Science. Studies published between and were considered. Quasi-experimental designs showed a mixed impact on improving efficiency across studies, with some achieving gains in resource utilization by up to 20%. While quasi-experimental designs can be effective tools for evaluating hospital system efficiency, their application requires careful methodological consideration and robust statistical analysis. Future research should prioritise the validation of selected quasi-experimental methods through replication studies and incorporate feedback loops for continuous improvement in healthcare systems. Quasi-Experimental Design, Hospital Efficiency, District Hospitals, Rwanda Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Geography, Africa, Hospital, Systems, Evaluation, Methodology, Quasi-Experimental*

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